



BUREAU OF AIR POLLUTION CONTROL

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Facility ID No. A0408

Permit No. AP1041-2248

MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: ANTLER PEAK GOLD INC. (HEREINAFTER REFERRED TO AS *THE PERMITTEE*)

Mailing Address: P.O. Box 2610; WINNEMUCCA, NEVADA 89446

Physical Address: APPROXIMATELY 22 MILES SOUTHWEST OF HAWTHORNE, NEVADA, VIA LUCKY BOY PASS ROAD

General Facility Location: SECTION 17 AND 18 OF T 5N, R 28E, MDB&M
HA 109 – EAST WALKER AREA/ MINERAL COUNTY
NORTH 4,240.43 KM, EAST 334.65 KM UTM ZONE 11 – NAD 83

Thermal Unit List: (5 Thermal Units)

A. System 01 – Carbon Stripping and Regeneration

TU	4.001	Carbon Kiln, manufactured by Scotia International of Nevada, model number PR 10-13, 100, serial number SCO-500
TU	4.002	Pregnant Tank, custom equipment, model number not specified, serial number not specified
TU	4.003	Barren Tank, custom equipment, model number not specified, serial number not specified

B. System 02 – Retorts

TU	4.004	Mercury Retort #1, manufactured by Scotia International of Nevada, model number CR 10, serial number 09-12, 565-200-A
TU	4.005	Mercury Retort #2, manufactured by Scotia International of Nevada, model number CR 10, serial number 09-12, 565-200-B



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Section I. General Conditions

The Permittee must comply with, but is not limited to, all conditions of Nevada Administrative Code (NAC) 445B.3611-3689 "Nevada Mercury Air Emissions Control Program", inclusive.

A. Records Retention. NAC 445B.3679.2(a)

The Permittee of a Mercury Operating Permit to Construct shall retain records of all required monitoring data and support information for (5) years after the date of the sample collection, measurement, report or analysis. Supporting information includes, without limitation, all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.

B. Severability. NAC 445B.3679.2(b)

Each of the conditions and requirements of the Mercury Operating Permit to Construct is severable and, if any are held invalid, the remaining conditions and requirements continue in effect.

C. Compliance/Noncompliance. NAC 445B.3679.2(c)

The Permittee must comply with all conditions of the Mercury Operating Permit to Construct. Any noncompliance constitutes a violation and is grounds for:

1. An action for noncompliance;
2. The revoking and reissuing, or the terminating of the Mercury Operating Permit to Construct by the Director; or
3. The reopening or revising of the Mercury Operating Permit to Construct by the holder of the Mercury Operating Permit to Construct as directed by the Director.

D. Defense to Noncompliance. NAC 445B.3679.2(d)

The need to halt or reduce activity to maintain compliance with the conditions of the Mercury Operating Permit to Construct is not a defense to noncompliance with any conditions of the Mercury Operating Permit to Construct.

E. Cause. NAC 445B.3679.2(e)

The Director may revise, revoke and reissue, reopen and revise, or terminate the Mercury Operating Permit to Construct for cause.

F. Property Rights/Exclusive Privilege. NAC 445B.3679.2(f)

The Mercury Operating Permit to Construct does not convey any property rights or any exclusive privilege.

G. Information Request from Director. NAC 445B.3679.2(g)

The Permittee shall provide the Director, in writing and within a reasonable time, with any information that the Director requests to determine whether cause exists for revoking or terminating the Mercury Operating Permit to Construct or to determine compliance with the conditions of this Mercury Operating Permit to Construct.

H. Right to Entry. NAC 445B.3679.2(h)

The Permittee shall allow the Director or any authorized representative of the Director, upon the presentation of credentials, to:

1. Enter upon the premises of *the Permittee* where:
 - a. The thermal unit that emits mercury is located;
 - b. Activity related to mercury emissions is conducted; or
 - c. Records are kept pursuant to the conditions of the Mercury Operating Permit to Construct.
2. Have access to and copy, during normal business hours, any records that are kept pursuant to the conditions of the Mercury Operating Permit to Construct;
3. Inspect, at reasonable times, any facilities, practices, operations, or equipment, including any equipment for monitoring or controlling air pollution, that are regulated or required pursuant to the Mercury Operating Permit to Construct; and
4. Sample or monitor, at reasonable times, substances or parameters to determine compliance with the conditions of the Mercury Operating Permit to Construct or applicable requirements.



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Section I. General Conditions (continued)

I. Certify True and Accurate. NAC 445B.3679.2(i)

A responsible official of the stationary source shall certify that, based on information and belief formed after reasonable inquiry, the statements made in any document required to be submitted by any condition of the Mercury Operating Permit to Construct are true, accurate and complete.

J. Yearly Reporting. NAC 445B.3679.3(b, c, d)

The Permittee will submit yearly reports including, but not limited to, throughput, production, fuel consumption, hours of operation, emissions and mercury co-product. These reports will be submitted on the form provided by the Bureau of Air Pollution Control for all emission units/systems specified on the form. The completed form must be submitted to the Bureau of Air Pollution Control no later than March 1 annually for the preceding calendar year, unless otherwise approved by the Bureau of Air Pollution Control.

K. Facilities Operation. NAC 445B.227

The Permittee may not:

1. Operate a stationary source of air pollution unless the control equipment for air pollution that is required by applicable requirements or conditions of the Mercury Operating Permit to Construct are installed and operating.
2. Disconnect, alter, modify or remove any of the control equipment for air pollution or modify any procedure required by an applicable requirement or condition of the Mercury Operating Permit to Construct.

L. Excess Emissions. NAC 445B.232

1. Scheduled maintenance or testing or scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive, must be approved by the Director and performed during a time designated by the Director as being favorable for atmospheric ventilation.
2. The Director must be notified in writing of the time and expected duration at least 24 hours in advance of any scheduled maintenance which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive.
3. The Director must be notified in writing or by telephone of the time and expected duration at least 24 hours in advance of any scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive.
4. The Director must be notified of any excess emissions within 24 hours after any malfunction or upset of the process equipment or equipment for controlling pollution or during startup or shutdown of such equipment. The telephone number for the notification is (775) 687-9350.
5. **The Permittee**, as the owner or operator of an affected facility, shall provide the Director, within 15 days after any malfunction, upset, startup, shutdown, or human error which results in excess emissions, sufficient information to enable the Director to determine the seriousness of the excess emissions. The information must include at least the following:
 - a. The identity of the stack or other point of emission, or both, where the excess emissions occurred.
 - b. The estimated magnitude of the excess emissions expressed in units of the applicable limitation on emission and the operating data and methods used in estimating the magnitude of the excess emissions.
 - c. The time and duration of the excess emissions.
 - d. The identity of the equipment causing the excess emissions.
 - e. If the excess emissions were the result of a malfunction, the steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunction.
 - f. The steps taken to limit the excess emissions.
 - g. Documentation that the equipment for controlling air pollution, process equipment, or processes were at all times maintained and operated, to a maximum extent practicable, in a manner consistent with good practice for minimizing emissions.

M. Construction Requirements: New, or Modified Thermal Units. NAC 445B.250

The Permittee shall provide the Director written notification of:

1. The date that construction or reconstruction of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply to mass-produced facilities which are purchased in completed form.



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Section I. General Conditions (continued)

2. The anticipated date of initial startup of an affected facility, postmarked not more than 60 days and not less than 30 days prior to such date.
3. The actual date of initial startup of an affected facility, postmarked within 15 days after such date.

N. Annual Testing.

Before the conclusion of each calendar year, *the Permittee* shall:

1. Conduct and record a Method 29 (or alternative test method approved by the Director) compliance test for mercury on the exhaust stack of Systems 01 - 02 consisting of three valid runs. Each of the three test runs must collect a sample volume of 1.7 dry standard cubic meters (60 dscf) or be conducted for up to two hours in an effort to collect this sample volume (NAC 445B.3679.3).
2. Simultaneously, during the Method 29 (or alternative test method approved by the Director) compliance test, conduct and record a material assay from Systems 01 - 02. One representative sample shall be taken for each test run. Total mercury content shall be determined using EPA Method 7471B (cold vapor atomic adsorption analysis) (or alternative test method approved by the Director) (NAC 445B.3679.3).
3. Conduct tests of performance under such conditions as the Director specifies to the operator of the plant based on representative performance of the affected facility. The owner or operator shall make available to the Director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3).
4. Give notice to the Director 30 days before the test of performance to allow the Director to have an observer present. A written testing procedure for the test of performance must be submitted to the Director at least 30 days before the test of performance to allow the Director to review the proposed testing procedures (NAC 445B.252.4).
5. Furnish the Director within 60 days after completing the performance tests a written and electronic report of the results of the performance tests. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3689 (NAC 445B.252.8).

O. SIP Article 2.5.4 Federally Enforceable SIP Requirement.

Breakdown or upset, determined by the Director to be unavoidable and not the result of careless or marginal operations, shall not be considered a violation of these regulations.

P. Expiration and Extension. NAC 445B.3687

1. If construction will occur in one phase, a mercury operating permit to construct for a new or modified thermal unit that emits mercury expires if construction is not commenced within 18 months after the date of issuance thereof or construction of the thermal unit that emits mercury is delayed for 18 months after initiated. The Director may extend the date on which the construction may be commenced upon a showing that the extension is justified.
2. If construction will occur in more than one phase, the projected date of the commencement of construction of each phase of construction must be approved by the Director. A mercury operating permit to construct expires if the initial phase of construction is not commenced within 18 months after the projected date of the commencement of construction approved by the Director. The Director may extend only the date on which the initial phase of construction may be commenced upon a showing that the extension is justified.

***** **End of General Conditions** *****



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Section II. Specific Operating Conditions

A. Emission Units #TU 4.001, TU 4.002, and TU 4.003 location North 4,240.43 km, East 334.65 km, UTM (Zone 11)

A. System 01 – Carbon Stripping and Regeneration

TU	4.001	Carbon Kiln, manufactured by Scotia International of Nevada, model number PR 10-13, 100, serial number SCO-500
TU	4.002	Pregnant Tank, custom equipment, model number not specified, serial number not specified
TU	4.003	Barren Tank, custom equipment, model number not specified, serial number not specified

1. Air Pollution Equipment

- a. Exhaust gases from **TU 4.001, TU 4.002 and TU 4.003** shall be ducted to a control system with 100% capture consisting of:
 - i. **Dynamic Wet Scrubber (WS-001)** (*manufacturer not specified*)
 - ii. **Carbon Deep Bed Scrubber (CA-001)** (*manufactured by Scotia International of Nevada*)
- b. Stack parameters
 - i. Height: 30 ft.
 - ii. Diameter: 0.417 ft.
 - iii. Stack temperature: 200°F
 - iv. Flow: Maximum volume flow rate of 883 dry standard cubic feet per minute (dscfm).
 - v. Units **TU 4.001, TU4 .002 and TU 4.003** are ducted to common controls and a common exhaust stack.

2. Construction Requirements (NAC 445B.3679.3)

The *Permittee* shall provide the Director written notification of:

- a. The date that construction of **TU 4.001**, is commenced, postmarked no later than 30 days after such date.
- b. The anticipated date of initial startup of **TU 4.001**, postmarked not more than 60 days and not less than 30 days prior to such date.
- c. The actual date of initial startup of **TU 4.001**, postmarked within 15 days after such date.

3. Operating Requirements

- a. Limitations of operation. NAC 445B.3679.3
 - i. The maximum allowable throughput rate of **carbon** from CIL circuit for **TU 4.001** shall not exceed **0.104 ton** per any one-hour period.
 - ii. The maximum allowable throughput rate of **precious metal bearing solution** for **TU 4.002** and **TU 4.003** each shall not exceed **60 gallons** per minute.
 - iii. Mercury emissions from **System 01** shall not exceed **1 x 10⁻⁵** grains per dry standard cubic foot (gr/dscf).
 - iv. **TU 4.001, TU 4.002, and TU 4.003** may operate simultaneously.
 - v. Hours
TU4.001, TU4.002 and TU4.003 each may operate a total of **8,760** hours per calendar year.



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Section II. Specific Operating Conditions (continued)

A. Emission Units # TU 4.001, TU 4.002, and TU 4.003 (continued)

b. Work practices. NAC 445B. 3679.3

- i. **TU 4.001, TU 4.002, TU 4.003, WS-001, and CA-001** shall be operated in accordance with the manufacturer's recommendations at all times during operating, including start-up and shut-down periods.
- ii. **TU 4.001** shall have a maximum heating temperature of 1,200°F.
- iii. **TU 4.001** shall automatically shut off via interlock if the temperature is equal to or above 1,300°F.
- iv. The water flow rate of **WS-001** shall be maintained between 1 – 3 gallons of per minute.
- v. The maximum exhaust gas temperature at the discharge of **WS-001** shall not exceed 180°F.
- vi. The differential pressure across **WS-001** shall be maintained between 10 – 12 inches of water.
- vii. The maximum exhaust gas temperature at the discharge of the inline heater prior to **CA-001** shall not exceed 190°F.
- viii. **CA-001** shall contain no less than 2,000 pounds of sulfur-impregnated carbon.
- ix. An alarm shall sound if the inline heater prior to **CA-001** has a temperature equal to or greater than 190°F.
- x. The differential pressure across **CA-001** shall not exceed 10 inches of water.
- xi. Replace all of the sulfur-impregnated carbon in **CA-001** according to the following schedule:
 - (a) The sulfur-impregnated carbon in **CA-001** shall be sampled 90 days after the initial replacement and every subsequent replacement of the sulfur impregnated carbon thereafter. The depth of the sample probe will be recorded, and the average carbon loading will be calculated. Sampling will commence quarterly thereafter. When the average carbon loading reaches **50%** of the design capacity of the carbon, monthly sampling will commence until **90%** of the average carbon loading is reached. The sulfur impregnated carbon will be replaced within **30** days of reaching **90%** of the average mercury carbon loading. The required mercury analysis shall be performed utilizing one of the following methods:
 1. EPA method 6020-Inductively Coupled Plasma-Mass Spectrometry;
 2. EPA method 7471B- Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique); or
 3. An alternative test method as approved in advance by the Director.
 - (b) Any sulfur-impregnated carbon replaced in **CA-001** shall be replaced with only the original manufacturer's design specification sulfur-impregnated carbon or with equivalent performing sulfur-impregnated carbon.
 - (c) The original manufacturer's design specifications for the sulfur-impregnated carbon used in **CA-001** shall be kept on site.



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A. Emission Units # TU 4.001, TU 4.002, and TU 4.003 (continued)

4. Monitoring, Recordkeeping and Reporting (NAC 445B. 3679.3)

a. Compliance Testing

Within 180 days of the notification of initial startup of **TU 4.001, TU 4.002, and TU 4.003** as required in A.2.a through c, of this section, the *Permittee* shall conduct and record a performance test for mercury on the exhaust stack of **TU 4.001, TU 4.002, and TU 4.003** consisting of three valid runs utilizing US EPA Method 29 of 40 CFR part 60 Appendix A.

b. Monitoring

The *Permittee*, upon issuance date of this permit, for **TU 4.001, TU 4.002, and TU 4.003** shall:

- i. Prior to commencement of **TU 4.001, TU 4.002, and TU 4.003**, install, operate, calibrate, and maintain instrumentation to continuously measure and record the following:
 - (a) The temperature of **TU 4.001** in degrees Fahrenheit.
 - (b) The **precious metal bearing solution** throughput rate of **TU 4.002 and TU 4.003** in gallons per minute.
 - (c) The outlet gas temperature of **WS-001** in degrees Fahrenheit.
 - (d) The water flow rate of **WS-001** in gallons per minute.
 - (e) The differential pressure of **WS-001** in inches of water.
 - (f) The inline heater outlet gas temperature of **CA-001** in degrees Fahrenheit.
 - (g) The differential pressure across **CA-001** in inches of water.
- ii. Prior to commencement of **TU 4.001** operation, install, operate, calibrate, and maintain an interlock that will shutdown **TU 4.001** if the temperature is greater than or equal to 1,300°F.
- iii. Prior to commencement of **CA-001** heater operation, install calibrate and maintain an exhaust gas temperature alarm prior to **CA-001** that will notify the operator if the temperature is greater than or equal to 190°F.
- iv. Monitor the total daily hours of operation for **TU 4.001**.
- v. Monitor the total daily throughput rate of **carbon** from CIL circuit for **TU 4.001** in tons.
- vi. Monitor the temperature of **TU 4.001** in degrees Fahrenheit continuously during operation.
- vii. Monitor the total daily hours of operation for **TU 4.002**.
- viii. Monitor the throughput rate of **precious metal bearing solution** for **TU 4.002** in gallons per minute once daily during operation.
- ix. Monitor the total daily hours of operation for **TU 4.003**.
- x. Monitor the throughput rate of **precious metal bearing solution** for **TU 4.003** in gallons per minute once daily during operation.
- xi. Monitor the outlet gas temperature for **WS-001** in degrees Fahrenheit continuously during operation.
- xii. Monitor the water flow rate for **WS-001** in gallons per minute continuously during operation.
- xiii. Monitor the differential pressure across **WS-001** in inches of water continuously during operation.
- xiv. Monitor the inline heater outlet gas temperature prior to **CA-001** in degrees Fahrenheit continuously during operation.
- xv. Monitor the differential pressure across **CA-001** in inches of water continuously during operation.
- xvi. Monitor the sulfur-impregnated carbon in **CA-001** for percentage of mercury by weight, monthly until reaching 90 percent capacity.

c. Recordkeeping

The required monitoring, established in Section A.4.b.i through xvi, shall be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:

- i. The calendar date of any required monitoring.
- ii. The total daily hours of operation for **TU 4.001**, for the corresponding date.
- iii. The total daily throughput rate of **carbon** from CIL circuit for **TU 4.001** in tons, for the corresponding date.
- iv. The temperature of **TU 4.001** in degrees Fahrenheit continuously during operation, based on a one-hour period, for the corresponding date.
- v. The total daily hours of operation for **TU 4.002**, for the corresponding date.
- vi. The throughput rate of **precious metal bearing solution** for **TU 4.002** in gallons per minute once daily during operation, for the corresponding date.



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Section II. Specific Operating Conditions (continued)

A. Emission Units # TU 4.001, TU 4.002, and TU 4.003 (continued)

- vii. The total daily hours of operation for **TU 4.003**, for the corresponding date.
- viii. The throughput rate of **precious metal bearing solution** for **TU 4.003** in gallons per minute once daily during operation, for the corresponding date.
- ix. The outlet gas temperature for **WS-001** in degrees Fahrenheit continuously during operation, based on a one-hour period, for the corresponding date.
- x. The water flow rate for **WS-001** in gallons per minute continuously during operation, based on a one-hour period, for the corresponding date.
- xi. The differential pressure across **WS-001** in inches of water continuously during operation, based on a one-hour period, for the corresponding date.
- xii. The heater outlet gas temperature prior to **CA-001** in degrees Fahrenheit continuously during operation, based on a one hour period, for the corresponding date.
- xiii. The differential pressure across **CA-001** in inches of water continuously during operation, based on a one hour period, for the corresponding date.
- xiv. The percentage of mercury by weight of the sulfur-impregnated carbon in **CA-001** from the monthly analysis, for the corresponding date.
- xv. The depth of the sample location in **CA-001** from the monthly analysis, for the corresponding date.
- xvi. The date, time, and weight of each sulfur-impregnated carbon replacement for **CA-001**, for the corresponding date.
- xvii. The date, time, and corrective action taken for an alarm notification or an interlock shut-down, for the corresponding date.
- xviii. The corresponding average hourly throughput rate for **TU 4.001** in tons per hour. The average hourly throughput rate will be determined from the total daily throughput rate (iii) and the total daily hours of operation (ii) above.

d. Reporting

Permittee will promptly report to the Director any deviations from the requirements of the Operating Permit to Construct. The report to the Director will include probable cause of all deviations and any action taken to correct deviations. For this Operating Permit to Construct, prompt is defined as submittal of a report within 15 days of said deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 and under condition I.L. of this permit.



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Section II. Specific Operating Conditions

B. Thermal Unit # TU 4.004 and TU4.005 location North 4,240.47 km, East 334.651 km, UTM (Zone 11)

B. System 02 – Mercury Retorts

TU	4.004	Mercury Retort #1; Manufactured by Scotia International of Nevada, model number CR10, serial number 09-12,565-200-A
TU	4.005	Mercury Retort #2; Manufactured by Scotia International of Nevada, model number CR10, serial number 09-12,565-200-B

1. Air Pollution Equipment

- a. Exhaust gases from **TU 4.004** and **TU 4.005** shall be ducted to a control system with 100% capture consisting of:
 - i. Mercury Condenser (**MC-001**) equipped with a chiller (*manufactured by Scotia International of Nevada*)
 - ii. Carbon Tray Scrubber (**CA-002**) (*manufactured by Scotia International of Nevada*)
- b. Stack Parameters
 - i. Height: 30 ft.
 - ii. Diameter: 5 in.
 - iii. Stack temperature: 200°F
 - iv. Flow: Maximum volume flow rate of 2,207 dry standard cubic feet per minute (dscfm).
 - v. Units **TU 4.004** and **TU 4.005** are ducted to common controls and a common exhaust stack.

2. Construction Requirements (NAC 445B.250)

The **Permittee** shall provide the Director written notification of:

- a. The date that construction of **TU 4.004** and **TU 4.005** is commenced, postmarked no later than 30 days after such date.
- b. The anticipated date of initial startup of **TU 4.004** and **TU 4.005**, postmarked not more than 60 days and not less than 30 days prior to such date.
- c. The actual date of initial startup of **TU 4.004** and **TU 4.005**, postmarked within 15 days after such date.

3. Operating Requirements

- a. Limitations of Operation NAC 445B.3679.3
 - i. The maximum allowable throughput rate of **precious metal precipitate** for **TU 4.004** and **TU 4.005**, each, shall not exceed **0.417 ton per batch**. “Precious metal precipitate” shall consist only of the following:
 - (a) Material loaded with precious metals such as gold and silver, along with various other metals that is produced by electrowinning, the Merrill-Crowe process, flotation and gravity separation processes, and other gold concentration or precipitation processes.
 - (b) Material collected from the wash-down of any equipment or surfaces contacted with precious metals that have been concentrated through the various concentration methods employed by precious metal mines.
 - ii. Mercury emissions from **TU 4.004** and **TU 4.005**, each shall not exceed **1.0 x 10⁻⁴** grains per dry standard cubic foot (gr/dscf).
 - iii. The precious metal precipitate shall be retorted in pans specified by the retort manufacturer and not exceed the volume capacity specified by the manufacturer, per pan.
 - iv. **TU 4.004** and **TU 4.005** may operate simultaneously.
 - v. Hours
 - (a) **TU 4.004** and **TU 4.005** each may operate a total of **8,760** hours per calendar year.



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Section II. Specific Operating Conditions (continued)

B. Thermal Unit # TU 4.004 and TU4.005 (continued)

b. Work Practice Standards NAC 445B.3679.3

- i. **TU 4.004, TU 4.005, MC-001, and CA-002** shall be operated in accordance with the manufacturer's recommendations at all times during operation, including start-up and shut-down periods.
- ii. During heating **TU 4.004** and **TU 4.005** shall be placed under negative gauge pressure between 250 and 330 mmHg.
- iii. **TU 4.004** and **TU 4.005** shall automatically shut off via interlock if the negative gauge pressure is less than 250 mmHg.
- iv. The maximum exhaust gas temperature at the discharge of **MC-001** shall not exceed 75°F.
- v. The condensed mercury from **MC-001** shall be collected monthly.
- vi. **TU 4.004** and **TU 4.005** shall automatically shut off via interlock if the exhaust gas temperature at the discharge of **MC-001** is above 90°F.
- vii. **TU 4.004** and **TU 4.005** shall automatically shut off via interlock if water flow into **MC-001** is not present.
- viii. **CA-002** shall contain no less than 1,500 pounds of sulfur-impregnated carbon.
- ix. The differential pressure across **CA-002** shall not exceed 10 inches of water.
- x. Replace the sulfur-impregnated carbon in **CA-002** according to the following schedule:
 - (a) The sulfur-impregnated carbon in **CA-002** shall be sampled 90 days after the initial replacement and every subsequent replacement of the sulfur-impregnated carbon thereafter. Representative samples shall be taken from the carbon tray near the inlet and the carbon tray near the outlet. The samples shall be analyzed as noted below. Sampling shall continue quarterly, at the same sample locations until either 12% by weight of the carbon tray near the inlet, or 6% by weight of the carbon tray near the outlet is reached. The carbon shall be replaced with an equivalent performing sulfur-impregnated carbon no later than 30 days after reaching 12% or 6% mercury by weight of the carbon. The required mercury analysis shall be performed utilizing one of the following methods:
 1. EPA method 6020-Inductively Coupled Plasma-Mass Spectrometry;
 2. EPA method 7471B- Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique); or
 3. An alternative test method as approved in advance by the Director.
 - (b) Any sulfur-impregnated carbon replaced in **CA-002** shall be replaced with only the original manufacturer's design specification sulfur-impregnated carbon or with equivalent performing sulfur-impregnated carbon.
 - (c) The original manufacturer's design specifications for the sulfur-impregnated carbon used in **CA-002** shall be kept on site.

4. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3379.3)

a. Compliance Testing

Within 180 days of the notification of initial startup of **TU 4.004** and **TU 4.005** as required in B.2.a through c, of this section, the *Permittee* shall conduct and record a performance test for mercury on the exhaust stack of **TU 4.003** and **TU4.004** consisting of three valid runs utilizing US EPA Method 29 of 40 CFR part 60 Appendix A.



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Issued to: Antler Peak Gold Inc.

Section II. Specific Operating Conditions (continued)

B. Thermal Unit # TU 4.004 and TU4.005 (continued)

b. Monitoring

The *Permittee* shall:

- i. Prior to commencement of **TU 4.004** and **TU 4.005**, install, operate, calibrate, and maintain instrumentation to continuously measure and record the following.
 - (a) The negative gauge pressure of **TU 4.004** and **TU 4.005**, each, in mmHg.
 - (b) The water flow rate into **MC-001**, in gallons per minute.
 - (c) The outlet gas temperature **MC-001**, in degrees Fahrenheit.
 - (d) The differential pressure across **CA-002**, in inches of water.
- ii. Prior to commencement of **TU 4.004** operation, install, operate, calibrate and maintain an interlock that will shut off the **TU 4.004**'s heating element if the negative gauge pressure is less than 250 mmHg.
- iii. Prior to commencement of **TU 4.005** operation, install, operate, calibrate and maintain an interlock that will shut off the **TU 4.005**'s heating element if the negative gauge pressure is less than 250 mmHg.
- iv. Prior to commencement of **MC-001**, install, operate, calibrate and maintain an interlock that will notify the operation when the water flow is not present.
- v. Prior to commencement of **MC-001**, install, operate, calibrate and maintain an exhaust gas temperature interlock that will shut off the **TU 4.004** and **TU 4.005**'s heating element if the exhaust gas from the condenser is 90° F or greater.
- vi. Monitor the daily batch weight of **precious metal precipitate** for **TU 4.004** and **TU 4.005**, in tons, for each batch.
- vii. Monitor the total daily hours of operation per batch for **TU 4.004** and **TU 4.005**, during each day of operation.
- viii. Monitor the negative vacuum gauge pressure for **TU 4.004** and **TU 4.005** in mmHg, continuously during operation.
- ix. Monitor the outlet gas temperature **MC-001** in degrees Fahrenheit, continuously during operation.
- x. Monitor the mercury drained from **MC-001** in pounds, monthly.
- xi. Monitor the differential pressure across the **CA-002** in inches of water, continuously during operation.
- xii. Monitor the sulfur-impregnated carbon in **CA-002** for percentage of mercury by weight, quarterly until reaching 12 or 6 percent capacity as specified in Section II.B.3.b.xii above.

c. Recordkeeping

The required monitoring, established in Section B.4.b.i through xii, shall be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:

- i. The calendar date of any required monitoring.
- ii. The total daily batch weight of **precious metal precipitate** for **TU 4.004** and **TU 4.005**, each, in tons, for the corresponding date.
- iii. The total daily hours of operation per batch for **TU 4.004** and **TU 4.005**, each, for the corresponding date.
- iv. The negative vacuum gauge pressure for **TU 4.004** and **TU 4.005**, each, in mmHg for the corresponding date.
- v. The outlet gas temperature **MC-001** in degrees Fahrenheit, continuously during operation, based on a one hour period, for the corresponding date.
- vi. The mercury drained from **MC-001** in pounds, monthly, for the corresponding date.
- vii. The differential pressure across **CA-002** in inches of water, continuously during operation, based on a one hour period, for the corresponding date.
- viii. The percentage of mercury by weight of the sulfur-impregnated carbon in **CA-002** from the monthly analysis.
- ix. The date, time, and weight of each sulfur-impregnated carbon replacement for **CA-002**, for the corresponding date.
- x. The date, time, and corrective action taken for an interlock shut-down, for the corresponding date.



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0408

Permit No. AP1041-2248

MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Antler Peak Gold Inc.

Section II. Specific Operating Conditions (continued)

B. Thermal Unit # TU 4.004 and TU 4.005 (continued)

d. Reporting

Permittee will promptly report to the Director any deviations from the requirements of the Operating Permit to Construct. The report to the Director will include probable cause of all deviations and any action taken to correct deviations. For this Operating Permit to Construct, prompt is defined as submittal of a report within 15 days of said deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 and under condition I.L. of this permit.

******* End of Specific Operating Conditions *******



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Section III. Amendments

This permit:

- 1. Is non-transferable. (NAC 445B.287.3)**
- 2. Will be posted conspicuously at or near the stationary source. (NAC 445B.318.5)**
- 3. Any party aggrieved by the Department's decision to issue this permit may appeal to the State Environmental Commission (SEC) within ten days after the date of notice of the Department's action. (NRS 445B.340)**

Signature: _____

Issued by: Rob Bamford
Supervisor, Permitting Branch
Bureau of Air Pollution Control

Phone: (775) 687-9330

Date: October 21, 2010